

MEDIA RELEASE

28 October 2022

Breakthrough Victoria invests in US quantum leader ColdQuanta to turbocharge quantum discoveries at new Swinburne R&D centre

[Breakthrough Victoria](#) will invest A\$29 million in US-based global quantum leader [ColdQuanta](#). The investment will help establish an Asia-Pacific quantum computing and technology facility at Swinburne University of Technology known as the ColdQuanta–Swinburne Quantum Technology Centre.

The investment will fund quantum breakthroughs with commercial potential and expand the state's quantum capability to create new industries and jobs to make Victoria a global player at the forefront of this critical technology.

This era defining deep tech could revolutionise the way we live, work and travel - from emissions reductions and earth monitoring systems, pharmaceutical drug development, optimising flight routes and strengthening cybersecurity systems.

Quantum technology uses the subatomic building blocks of nature to perform more efficient computer calculations, improve navigation and timing systems, provide more secure communications, and deliver more accurate healthcare imaging through quantum sensing. However, these quantum breakthroughs require long-term investment and a skilled talent pool.

Building on shared expertise in cold atom science, ColdQuanta will partner with Swinburne University of Technology to bring world-class quantum capabilities to Victoria, connect the research community with industry and create opportunities for local job development and economic growth. It will provide a gateway to the broader quantum community across other universities and strengthen Australia's sovereign capability in quantum technology.

The investment will fund:

- ColdQuanta–Swinburne Quantum Technology Centre with world-class quantum capability;
- Quantum Workforce Development Initiative to establish a world-leading education and training centre to prepare the future quantum workforce and address the global skills deficiency;
- Advanced manufacturing capability with the potential local production of glass cells used in the cold atom method supporting the miniaturisation of quantum technology; and
- Advanced manufacturing capability expansion in photonics development and miniaturisation.

Australia's national science agency, CSIRO, estimated Australia's quantum technology industry has the potential to support 19,000 new jobs and generate \$6 billion annual revenue by 2045.

One of the major challenges facing the quantum technology sector is the lack of a qualified workforce. ColdQuanta will work with Swinburne University of Technology to develop new programs to educate and train the next generation of workers to advance quantum information science, including STEM (science, technology, engineering, math) and related fields.

Breakthrough Victoria invests A\$29 million to accelerate quantum technology R&D in Victoria

“Quantum technology has the potential to transform many sectors, including the pharmaceutical, energy, finance, transport and communications industries,” Breakthrough Victoria CEO Grant Dooley said. “Breakthrough Victoria’s investment will accelerate R&D and commercialisation in quantum technology, attracting greater investment into Victoria.

“The investment will create jobs and develop world class skills development in quantum technology, while producing long-term, sustainable returns for Victoria.”

ColdQuanta’s expansion into Victoria to expand local quantum technology expertise

ColdQuanta CEO Scott Faris said: “Victoria’s investment in quantum will drive economic growth and ultimately a competitive advantage for Australia.”

“Building this Centre will attract new opportunities to Victoria and bring the expertise needed to leverage quantum technology to its fullest extent. ColdQuanta is excited to be part of building quantum capabilities in, with and for Australia.

“This partnership is an important milestone for ColdQuanta as it further expands our global presence and recognises the technical leadership of our hardware and software products.”

Swinburne building the next generation workforce to power the quantum revolution

Swinburne University of Technology’s Vice-Chancellor and President Professor Pascale Quester said: “Swinburne’s world-leading strengths in cold-atom science and technology make us a natural partner with ColdQuanta as we work together to grow the quantum industry in Victoria.”

“By using atoms cooled to the lowest known temperatures in the universe, we are opening the pathway to a broad suite of quantum technologies that can potentially revolutionise the world as we know it.

“Working at the intersection of industry, research and investment, we are delighted to be helping upskill and reskill the next generation workforce required to power this revolution and bring people and technology together to build a better world.”

ENDS

For more information:

About Breakthrough Victoria Pty Ltd

Established in 2021 to manage the Victorian Government’s \$2 billion Breakthrough Victoria Fund. Breakthrough Victoria invests in innovations with commercial potential to transform the health and life sciences, digital technologies, advanced manufacturing, agri-food and clean economy sectors. We invest in innovation for impact and generate jobs and prosperity for Victoria over the long-term.

About Swinburne University of Technology

Swinburne University of Technology is defined and inspired by technology and innovation, and renowned for our strong industry and community engagement. With a vision of people and technology working together to build a better world, our people are driven by a shared purpose: to create tomorrow’s technology and the human capital and talent required for a digital, tech-rich future. Swinburne is a different university – one that is truly of technology, of innovation and of entrepreneurship. We give students real-world experience to succeed, and empower our researchers to collaborate with industry, community and government to co-create the technology solutions our world needs.

About ColdQuanta

ColdQuanta is a global quantum technology company solving the world's most challenging problems. The company harnesses quantum mechanics to build and integrate quantum computers, sensors, and networks. From fundamental physics to leading edge commercial products, ColdQuanta enables "quantum everywhere" through our ecosystem of devices and platforms. Founded in 2007,

ColdQuanta grew from decades of research in atomic physics and work at JILA, with intellectual property licensed through the University of Colorado and University of Wisconsin. ColdQuanta's scalable and versatile cold atom technology is used by world-class organizations around the globe and deployed by NASA on the International Space Station.